

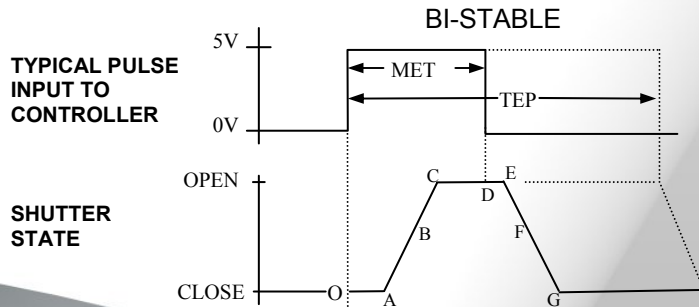
**FEATURES**

- ⌚ All new **N-CAS** actuator system radically reduces moving parts.
- ⌚ Bi-stable configuration is standard.
- ⌚ Can be configured for uni-stable operation (when used with VDM1000). Uni-stable version is available by special order and can be configured normally open or normally closed.
- ⌚ Simple design provides maximum clearance around the aperture.
- ⌚ Smallest aperture NS device presently available.
- ⌚ Machined flat surfaces for easy integration into virtually any system.
- ⌚ Small form factor, 15mm aperture, 1.40 inch overall diameter.
- ⌚ Reflective blades available.
- ⌚ Terminated to 6 inch 3-pin male connector harness. Optional 5103C cable required for connection to VDM1000.

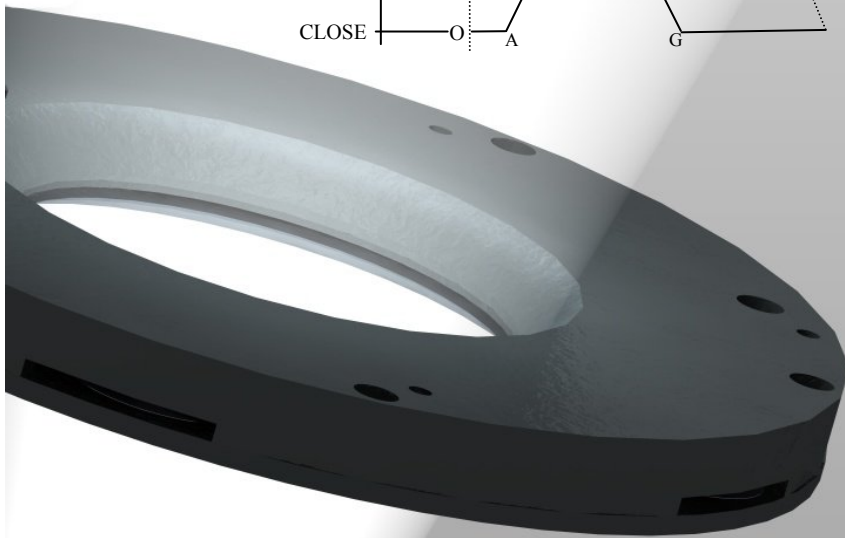
In our ongoing effort to improve the state of shutter technology, Vincent Associates, the manufacturer of **UNIBLITZ®** and now **UNIBLITZ® II** shutters, has again endeavored to provide an even more reliable shutter product for the Photonics industry with the introduction of the 15mm aperture version of the patent pending **N-CAS** (Non-Contact Actuation System) shutter, the **NS15**. The **NS15** is the smallest NS standard device presently available. The device's reliability has been enhanced by significantly reducing the number of moving parts. In the 15mm aperture version, the **NS15**, has a total number of six moving parts, five of which are the blades themselves! The activating mechanism is non-contact and has shown to increase its reliability through testing over similar shutter designs. Bi-stable version is standard and uni-stable is available by special order. The **N-CAS** shutter system has demonstrated to be the most reliable shutter device of its type available on the market today!

**TIMING**

Typical timing values (msec.) using UNIBLITZ drive equipment and measured with UNIBLITZ shutters equipped with standard TEFLON® coated shutter blades. (Uni-stable timing available upon request.)



O-A Delay time on opening after current is applied	2.5
A-C Transfer time on opening	3.0
O-C Total opening time	5.5
B-F Min. equivalent exp. Time	9.0
C-E Min. dwell time with min. input pulse	3.0
D-E Delay time on closing after current is applied	2.5
E-G Transfer time on closing	3.0
A-G Total window time	9.0
MET: Min. exposure time	7.0

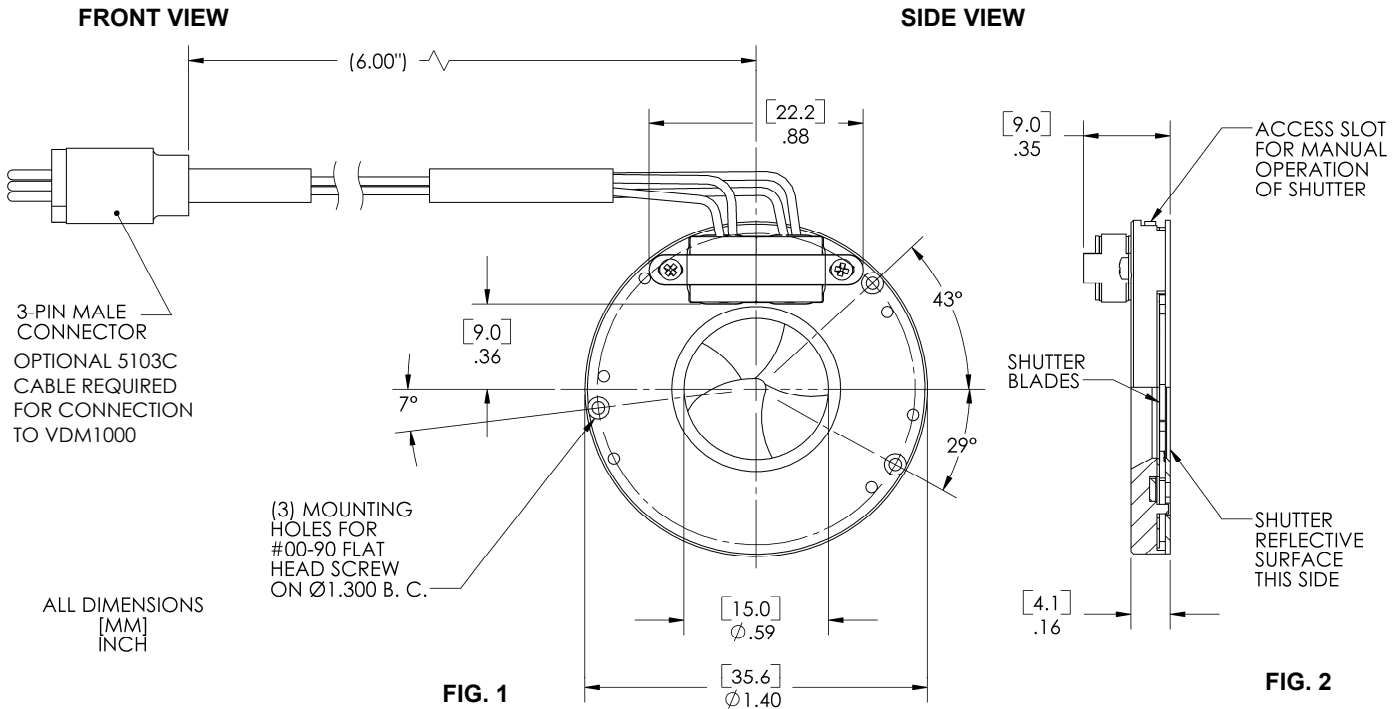


**PRODUCT OPTIONS**

APERTURE SIZE	HOUSING	BLADE FINISH	ELECTRONIC SYNC.	CONNECTOR
NS15B-15mm (Bi-stable)	1-UNHOUSED	T-TEFLON COATED	0-OMIT SYNC	L-18" FLYING LEADS OMIT 3-PIN CONNECTOR
	HOUSING AVAIL AT A FUTURE DATE	S-POLISHED STAINLESS STEEL BLADES* ZM- AlMgF <sub>2</sub> COATED BeCu BLADES* Z- AlSiO COATED BeCu BLADES*	SYNC AVAIL AT A FUTURE DATE	OMIT "L": INSTALL 3-PIN CONNECTOR WITH 6" HARNESS (SEE FIG 1)

\*Input side only, Teflon® coating is on opposite side. Intended to protect the shutter blade surface, light source must be input to the reflective side only.  
Contact a technical representative for OEM drive requirements.

**BI-STABLE VERSION**



**ELECTRICAL**

Coil Resistance - each coil	24 Ohms
Pulse Voltage to Open	+36VDC
Hold Voltage	N/A
For OEM driver applications contact technical support for typical drive circuits and wiring diagrams.	

**MECHANICAL**

Weight Un-Housed	0.33oz (9.3g)
Operating Temperature	0°C to +80°C
Maximum Opening bounce	15%
Maximum Closing Bounce	5%
Number of Blades	5

The **UNIBLITZ® II** N-CAS® NS15 is designed with low-profile and flat surfaces for easy integration into your system. The body of the shutter measures 1.40" in diameter and only .160" thick. The only protrusion from this envelope is the small actuator and hold down bracket which has a clearance of .36" from the center of the aperture.

The NS15 will be actuated by the VDM1000, a new driver built specifically to take advantage of the NS15's low power requirements. This new driver will permit the NS15 to operate with virtually identical open and close times.

The NS15 will be available in multiple configurations. The standard shutter will operate as a bi-stable shutter. In this configuration the shutter will not require power to remain in the open or closed position. The N-CAS NS15 series shutters can be also be converted to uni-stable operation. In this configuration the shutter will require power to remain open with a failsafe closure. As a uni-stable device, the NS15 can be configured normally open to provide reverse functionality, close with a failsafe opening. The NS15 uni-stable version can be purchased as a special order, please consult the factory for availability. There are no dimensional changes associated with the uni-stable configuration, merely a different driver circuit which selectable on the VDM1000.

The standard shutter is terminated with 3-pin connector harness 6" in length and can also be provided with 18" flying leads. The optional 5103C cable is required when controlling the NS15 shutter with the VDM1000. There is an access slot located above the actuator that will allow for manual operation of the shutter if so desired.

Due to our ongoing product development program, Vincent Associates reserves the right to discontinue or change specifications or designs at any time, without incurring any obligations. Teflon® is a registered trade mark of E.I. DuPont U. S. Pat. No. 3,427,576; 3,595,553; 3,967,293; 6,652,165. Drawing shown for illustrative purposes only. Patent applied for.

Updated 01/08